ANI-1AHC

3D Mini HDMI Analyzer
HDMI Analyzer & Signal Generator 1080p and 3D Support

INSTRUCTION MANUAL

A-NEUVIDEO™

AUDIO / VIDEO MANUFACTURER

A-NeuVideo.com | Frisco, Texas 75034 | (317) 456-2461

V.1.2

SAFETY INFORMATION

1. To ensure the best results from this product, please read this manual and all other documentation before operating your equipment. Retain all documentation for future reference.
2. Follow all instructions printed on unit chassis for proper operation.
3. To reduce the risk of fire, do not spill water or other liquids into or on the unit, or operate the unit while standing in liquid.
4. Make sure power outlets conform to the power requirements listed on the back of the unit. Keep unit protected from rain, water and excessive moisture.
5. Do not attempt to clean the unit with chemical solvents or aerosol cleaners, as this may damage the unit. Dust with a clean dry cloth.
6. Do not use the unit if the electrical power cord is frayed or broken. The power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords and plugs, convenience receptacles, and the point where they exit from the appliance.
7. Do not force switched or external connections in any way. They should all connect easily, without needing to be forced.
8. Always operate the unit with the AC ground wire connected to the electrical system ground. Precautions should be taken so that the means of grounding of a piece of equipment is not defeated.
9. AC voltage must be correct and the same as that printed on the rear of the unit. Damage caused by connection to improper AC voltage is not covered by any warranty.
10. Turn power off and disconnect unit from AC current before making connections.
11. Never hold a power switch in the “ON” position.
12. This unit should be installed in a cool dry place, away from sources of excessive heat, vibration, dust, moisture and cold. Do not use the unit near stoves, heat registers, radiators, or other heat producing devices.
13. Do not block fan intake or exhaust ports. Do not operate equipment on a surface or in an environment which may impede the normal flow of air around the unit, such as a bed, rug, carpet, or completely enclosed rack. If the unit is used in an extremely dusty or smoky environment, the unit should be periodically “blown free” of foreign dust and matter.
14. To reduce the risk of electric shock, do not remove the cover. There are no user serviceable parts inside. Refer all servicing to qualified service personnel. There are no user serviceable parts inside.
15. When moving the unit, disconnect input ports first, then remove the power cable; finally, disconnect the interconnecting cables to other devices.
16. Do not drive the inputs with a signal level greater than that required to drive equipment to full output.
17. The equipment power cord should be unplugged from the outlet when left unused for a long period of time.
18. Save the carton and packing material even if the equipment has arrived in good condition. Should you ever need to ship the unit, use only the original factory packing.
19. Service Information Equipment should be serviced by qualifier service personnel when:
    A. The power supply cord or the plug has been damaged.
    B. Objects have fallen, or liquid has been spilled into the equipment.
    C. The equipment has been exposed to rain
    D. The equipment does not appear to operate normally, or exhibits a marked change in performance
    E. The equipment has been dropped, or the enclosure damaged.

TABLE OF CONTENTS

CONTENTS

Introduction & Package Contents 1
Features & Specifications 2
Operation Controls and Functions 4
- Front Panel 4
- Rear Panel 4
- Top Panel 5

OSD Menu 6
- System Info 6
- Sink EDID 7
- Source Infoframe 7
- CEC Command 7
- Audio Return 7
- Deep Color Set 7
- Exit 7

OLED Display 8
Timing Table (Pattern Mode) 9
Support Pattern Table 10
Connection Diagram 11

INTRODUCTION

The 3D Mini-HDMI Analyzer is a tool for checking both source (Blu-ray or DVD players) and display devices (TV or monitors). With touch button controls and built-in OLED (Organic Light Emitting Diode) display it can show the status and information of both the input and output devices connected to it by HDMI.

The analyzer can be used to analyze the input source device info-frame and output sink device EDID. It also has a built-in pattern generator that can be used to test the capabilities of the output device including 3D and resolution/timing support.

PACKAGE CONTENTS

Check that you have the following components;

(1) 3D Mini-HDMI Analyzer
(1) Users Guide
(1) 5 V Power Adaptor

APPLICATIONS

- Apparatus testing
- Equipment checking
- EDID checking
- HDCP or 3D support verification
- Production testing
- R&D design and debug

SAFETY PRECAUTIONS

Please read all instructions before attempting to unpack, install or operate this equipment and before connecting the power supply. Please keep the following in mind as you unpack and install this equipment:

- Always follow basic safety precautions to reduce the risk of fire, electrical shock and injury to persons.
- To prevent fire or shock hazard, do not expose the unit to rain, moisture or install this product near water.
- Never spill liquid of any kind on or into this product.
- Never push an object of any kind into this product through any openings or empty slots in the unit, as you may damage parts inside the unit.
- Do not attach the power supply cabling to building surfaces.
- Use only the supplied power supply unit (PSU). Do not use the PSU if it is damaged.
- Do not allow anything to rest on the power cabling or allow any weight to be placed upon it or any person walk on it.
- To protect the unit from overheating, do not block any vents or openings in the unit housing that provide ventilation and allow for sufficient space for air to circulate around the unit.

DISCLAIMERS

The information in this manual has been carefully checked and is believed to be accurate. We assume no responsibility for any infringements of patents or other rights of third parties which may result from its use.

We assume no responsibility for any inaccuracies that may be contained in this document. We make no commitment to update or to keep current the information contained in this document.

We reserve the right to make improvements to this document and/or product at any time and without notice.

COPYRIGHT NOTICE

No part of this document may be reproduced, transmitted, transcribed, stored in a retrieval system, or any of its part translated into any language or computer file, in any form or by any means — electronic, mechanical, magnetic, optical, chemical, manual, or otherwise — without express written permission and consent

© Copyright 2011. All Rights Reserved.

Version 1.2 JUNE 2013

TRADEMARK ACKNOWLEDGMENTS

All products or service names mentioned in this document may be trademarks of the companies with which they are associated.

FEATURES & SPECIFICATIONS

FEATURES

- Supports Timing include SD, HD up to 1080p, PC up to WUXGA and 3D
- Provides 25 timings, 6 patterns and 1 pattern for 3D timing
- 'Deep color' video support (up to 12-bit, 1080p@60 Hz)
- Supports input signal bypass, digital video formats in 'Deep Color' Mode up to 36-bit (12-bit/color) and new lossless compressed digital audio (Dolby TrueHD, Dolby Digital Plus and DTS-HD Master Audio)
- Supports internal pattern audio LPCM 2CH 48/96/192 kHz, LPCM 5.1CH 48/96 kHz, LPCM 7.1CH 48/96 kHz
- Analyze the input source info-frame and output sink EDID information
- Touch button control function
- OLED display shows Input/Output timing information
- Supports ARC (Audio Return Channel) following HDMI v1.4 specifications
- Supports 'Deep Color' (8/10/12-bit) output
- Supports HDCP repeater function and complaint with HDCP
- Supports CEC bypass

SPECIFICATIONS

TMDS Clock Frequency: 225 MHz

Input Port: 1× HDMI (Female type)

Output Port: 1× HDMI (Female type)

EXT Mode (HDMI input):

- **HDMI Resolution:** 480i/p, 576i/p, 720p~1080p
- **PC Resolution:** VGA~WUXGAINT Mode (internal pattern)
- **HDMI Resolution:** 480i/p, 576i/p, 720p~1080p

PC Resolution: VGA~SXGA, WUXGA

3D Resolution:

- **Frame Packing:** 1080p@24,720p@50/60
- **Side-by-Side:** (Half) 1080p@24, 720p@50/60
- **Top-and-Bottom:** 1080p@24, 720p@50/60

Audio Format: 480i/p, 576i/p or VGA~SVGA supports LPCM 2CH 48/96/192 kHz, LPCM 5.1CH 48 kHz, LPCM 7.1CH 48 kHz, 720p~1080p or XGA~WUXGA support LPCM 2CH, 48/96/192 kHz, LPCM 5.1CH 48/96 kHz, LPCM 7.1CH, 48/96 kHz

HDMI Cable In: 1080p/8-bit 15 m, 1080p/12-bit 10 m

HDMI Cable Out: 1080p/8-bit 15 m, 1080p/12-bit 10 m

ESD Protection: Human Body model: ±8 kV (air-gap discharge) ±4 kV (contact discharge)

Power Supply: 5 V/1 A DC (US/EU standards, CE/FCC/UL certified)

Dimensions (WxDxH): 4.7 x 2.75 x 1 in

Weight: < 1lbs.

Chassis Material: Plastic

Silk Screen Color: Black

Operating Temperature: 32˚F ~ 104˚F (* 0˚C ~ 40˚C)

Storage Temperature: −4˚F ~ 140˚F (−20˚C ~ 60˚C)

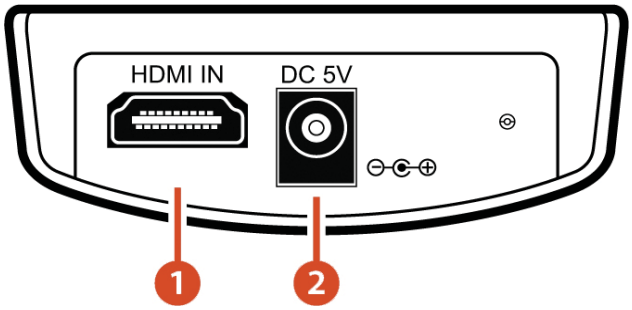
Relative Humidity: 20 ~ 90 % RH (no condensation)

Power Consumption: 5W (Max)

Note: Specifications are subject to change without notice.

OPERATION CONTROLS AND FUNCTIONS

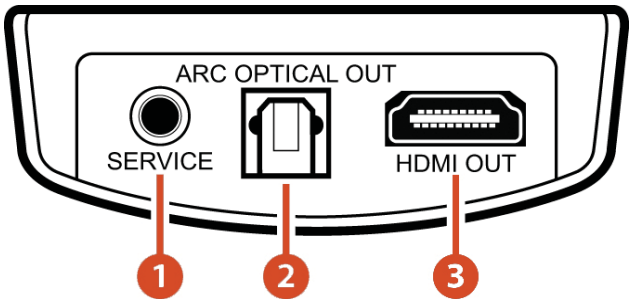
FRONT PANEL



1 **HDMI IN:** Connect the HDMI input port to the HDMI output port of the source device for testing and displaying the EDID information.

2 **DC 5V:** Plug the DC 5 V power supply into the Mini-HDMI Analyzer and connect the adaptor to an AC wall outlet.

REAR PANEL



1 **SERVICE:** Use a DB9 (RS-232) to 3.5 mm (phone jack) cable to do the software upgrade.

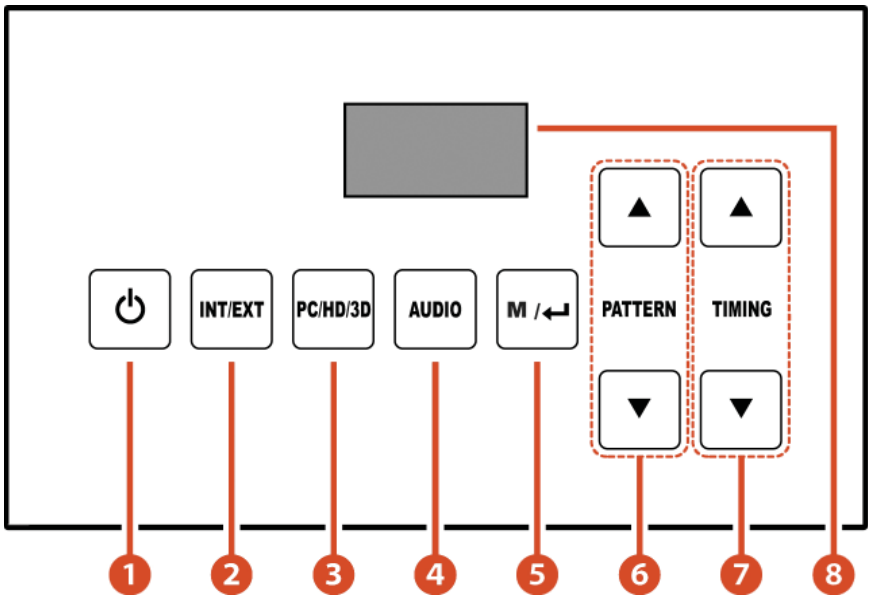
NOTE: This feature is not available to the end user. The DB9 to 3.5 mm phone jack is not included in the package.

2 **ARC OPTICAL OUT:** Optical digital out for testing the ARC function of a TV connected to the HDMI. Connect to the optical digital input of an audio system (such as an AV receiver) to monitor the audio output of the attached sink device.

3 **HDMI OUT:** Connects the Analyzer to a display or to devices connected to the display when testing the capabilities of the system.

OPERATION CONTROLS AND FUNCTIONS CONTINUED

TOP PANEL



Note: Please remove the protective plastic film from the top panel before using the touch key function.

1 **POWER:** Press this button to turn on the device, the LED will turn blue. Press again to switch the unit to standby mode, the LED will turn red.

2 **INT/EXT:** Press this button to toggle between the built-in internal pattern generator or the external source device. The LED will illuminate in blue when the external input is selected. To retrieve the external EDID information, an external source device must be connected otherwise the device will only generate the test patterns to display on the TV/monitor.

3 **PC/HD/3D:** Press this button to cycle through the test patterns (PC/HD or 3D timings). The OLED display will show the timing currently selected.

4 **AUDIO:** Press this button to select the audio sample rate from LPCM 2CH, LPCM 5.1CH and LPCM 7.1CH 48 kHz or LPCM 2CH, LPCM 5.1CH and LPCM 7.1CH 96 kHz or LPCM 2CH and LPCM 5.1CH 192 kHz.
Note: Press and hold for 3 seconds to select Audio mute function.

5 **M/↵ :** Press this button to enter the main menu and/or to confirm the selection.

6 **PATTERN (▲/▼):** Press these keys to select the patterns or when in OSD manual press these keys to select for option.

7 **TIMING (▲/▼):** Press these keys to select the required timings.

8 **OLED Display:** Displays the relevant Information about attached devices.

OSD MENU

OSD MENU

Press the M/↵ button from the device to bring up the OSD on the display.

- Press pattern's [▲/▼] to highlight on option
- Press [M/↵] to confirm the selection 5.

SYSTEM INFO

Press this button to show the EDID information for any connected device. When an output display is connected, press this button repeatedly to bring up the patterns for display (Refer to Section 10 for pattern details).

Press [M/↵] to check the input/output device information and software version.

SINK EDID, SOURCE INFOFRAME, CEC COMMAND, AUDIO RETURN, DEEP COLOR SET & EXIT OPTIONS

SINK EDID

OPTION	DESCRIPTION
Block Data	To check the sink Block0 and Block1's EDID table
Description	To check the sink description of EDID

SOURCE INFOFRAME

OPTION	DESCRIPTION
AVI (AVI infoframe data)	To check the sink Block0 and Block1's EDID table
AUD (Audio infoframe data)	To check the sink description of EDID

CEC COMMAND

OPTION	DESCRIPTION
Stand By	To check the sink Block0 and Block1's EDID table
Active Source	To check the sink description of EDID
Monitor (Read)	To detect the command data on the CEC Bus

Note: Source equipment must support CEC function in order to activate this function.

AUDIO RETURN

OPTION	DESCRIPTION
Audio Return	On/Off

DEEP COLOR SET

OPTION	DESCRIPTION
8-bit	On/Off
10-bit	On/Off
12-bit	On/Off

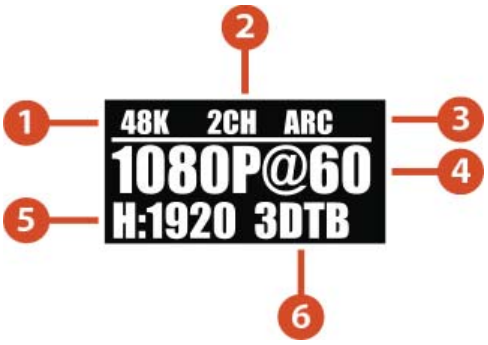
Note: The device will auto-detect the sink device's 'Deep Color' setting and if any of the settings are not supported, the option in the Deep Color set will not be selectable.

EXIT

Select to Exit the main menu

OLED DISPLAY

OLED DISPLAY



1 Sampling Rate: The Analyzer supports audio sampling rates of 48/96/192 kHz, display will show the signals current sample rate. If external audio is selected the OLED will display 'BYPASS'.

2 Audio Channels: The device supports audio channels from LPCM 2, 5.1 and 7.1CH. If external audio is selected the OLED will display 'BYPASS'.

Note: When the audio button is held down for 3 seconds, both 1 & 2 will show AUDIO MUTE.

3 ARC: Audio Return Channel, when this function is selected the OLED display will show 'ARC' if an ARC signal is present.

4 V Timing: Please refer to the Timing Table in Section 9 for details of the supported timing and V sync.

5 H Timing: Please refer to the Timing Table in Section 9 for details of the supported H Sync.

6 3D Format: Only when the 3D pattern is selected, the OLED display will show the pattern details.

Note: When in EXT Mode, the OLED display will show the input H/V Sync with the timing frequency and 3D pattern if any.

TIMING TABLE (PATTERN MODE)

No.	RESOLUTION	V Hz		No.	RESOLUTION	V Hz
T01	480p	60		T14	1024×768	60
T02	480i	60		T15	1280×1024	60
T03	720P	60		T16	1920×1200	60
T04	1080i	60		T17	720p (3D Frame Packing)	60
T05	1080p	60		T18	720p (3D Side-by-Side)	60
T06	576i	50		T19	720p (3D Top-to-Bottom)	60
T07	576p	50		T20	720p (3D Frame Packing)	50
T08	720p	50		T21	720p (3D Side-by-Side)	50
T09	1080i	50		T22	720p (3D Top-to-Bottom)	50
T10	1080p	50		T23	1080p (3D Frame Packing)	24
T11	1080p	24		T24	1080p (3D Side-by-Side)	24
T12	640×480	60		T25	1080p (3D Top-to-Bottom)	24
T13	800×600	60				

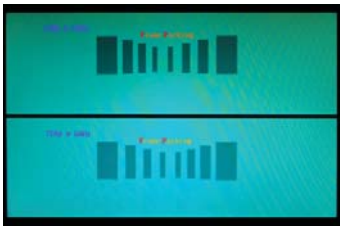
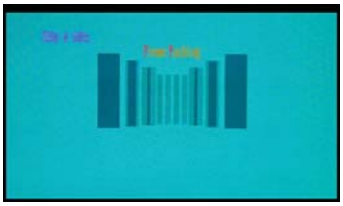
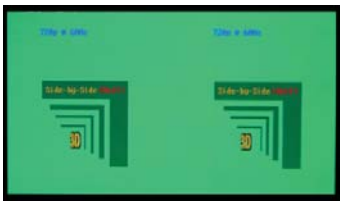
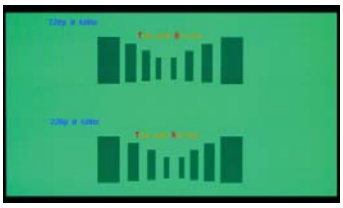
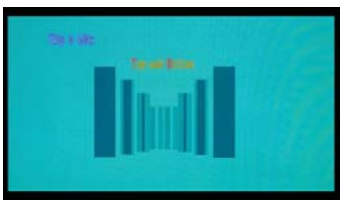
TIMING TABLE

TIMING TABLE (PATTERN MODE)

GROUP	NO.	PATTERN	DESCRIPTION
Standard Type	1		Primary colors: Red, Green, Blue P1: Red P2: Green P3: Blue
	2		
	3		
	4		P4: Horizontal RGB Bar
	5		P5: H Grey Scale
	6		P6: HDCP handshaking and link-integrity test

SUPPORT PATTERN TABLE

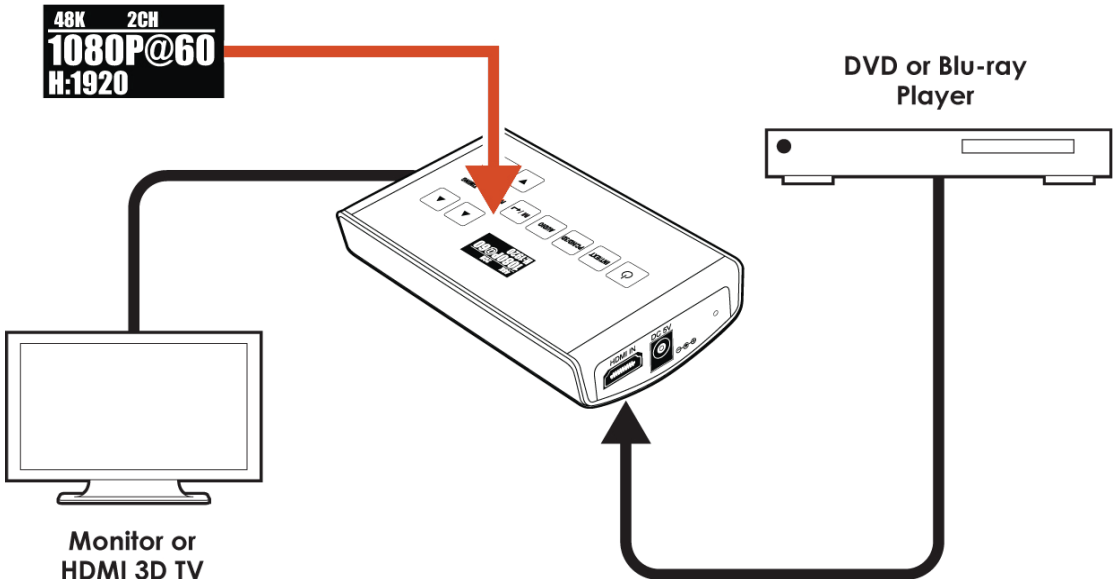
SUPPORT PATTERN TABLE

GROUP	NO.	PATTERN	DESCRIPTION
3D Type	*7 (FP)		P7(FP): Frame Packing Non-3D Display
			P7(FP): Frame Packing 3D Display
	*7 (SH)		P7(SH): Side-by-Side (Half) Non-3D Display
			P7(SH): Side-by-Side (Half) 3D Display
	*7 (TB)		P7 (TB): Top-and-Bottom Non-3D Display
			P7 (TB): Top-and-Bottom 3D Display

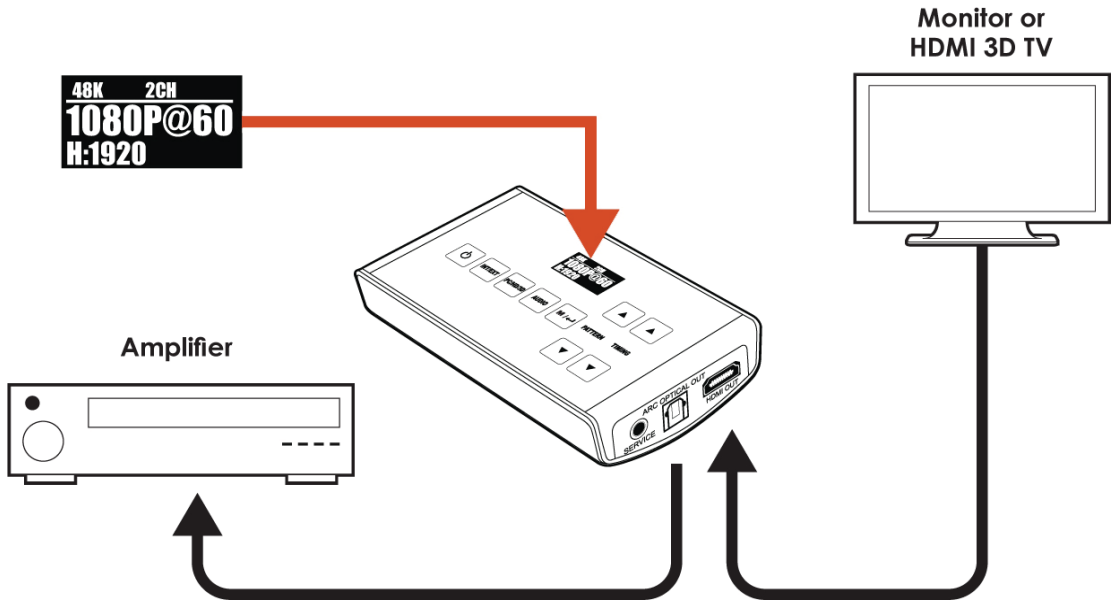
CONNECTION DIAGRAM

CONNECTION DIAGRAM

For checking both the source and display device's information, press M/↵ to display the System Information.



For checking only the display device's supported timings, connect the HDMI output only to the display device and press the PATTERN and TIMING buttons.



TERMS AND CONDITIONS OF USE

PLEASE READ THE FOLLOWING TERMS AND CONDITIONS CAREFULLY BEFORE USING THIS HARDWARE, COMPONENTS AND SOFTWARE PROVIDED BY, THROUGH OR UNDER A-NeuVideo, INC (COLLECTIVELY, THE "PRODUCT"). By using installing or using the Product, you unconditionally signify your agreement to these Terms and Conditions. If you do not agree to these Terms and Conditions, do not use the Product and return the Product to A-NeuVideo, Inc. at the return address set forth on the Product's packing label at your expense. A-NeuVideo, Inc. may modify these Terms and Conditions at anytime, without notice to you.

RESTRICTIONS ON USE OF THE PRODUCT

It is your responsibility to read and understand the installation and operation instructions, both verbal and in writing, provided to you with respect to the Product. You are authorized to use the Product solely in connection with such instructions. Any use of the Product not in accordance with such instructions shall void any warranty pertaining to the Product. Any and all damages that may occur in the use of the Product that is not strictly in accordance with such instructions shall be borne by you and you agree to indemnify and hold harmless A-NeuVideo, Inc. from and against any such damage.

The Product is protected by certain intellectual property rights owned by or licensed to A-NeuVideo. Any intellectual property rights pertaining to the Product are licensed to you by A-NeuVideo, Inc. and/or its affiliates, including any manufacturers or distributors of the Product (collectively, "A-NeuVideo") for your personal use only, provided that you do not change or delete any proprietary notices that may be provided with respect to the Product.

The Product is sold to you and any use of any associated intellectual property is deemed to be licensed to you by A-NeuVideo for your personal use only. A-NeuVideo does not transfer either the title or the intellectual property rights to the Product and A-NeuVideo retains full and complete title to the intellectual property rights therein. All trademarks and logos are owned by A-NeuVideo or its licensors and providers of the Product, and you may not copy or use them in any manner without the prior written consent of A-NeuVideo, which consent may be withheld at the sole discretion of A-NeuVideo.

The functionality and usability of the Product is controlled by A-NeuVideo, Inc. from its offices within the State of Texas, United States of America. A-NeuVideo makes no representation that materials pertaining to the Product are appropriate or available for use in other locations other than the shipping address you provided with respect thereto. You are advised that the Product may be subject to U.S. export controls.

Disclaimers and Limitation of Liability

A-NeuVideo may change or modify the Product at any time, from time to time.

THE PRODUCT IS PROVIDED "AS IS" AND WITHOUT WARRANTIES OF ANY KIND EITHER EXPRESS OR IMPLIED. A-NEUVIDEO DOES NOT WARRANT OR MAKE ANY REPRESENTATIONS REGARDING THE USE OR THE RESULTS OF THE USE OF THE PRODUCT'S CORRECTNESS, ACCURACY, RELIABILITY, OR OTHERWISE.

A-NeuVideo has no duty or policy to update any information or statements pertaining to the Product and, therefore, such information or statements should not be relied upon as being current as of the date you use the Product. Moreover, any portion of the materials pertaining to the Product may include technical inaccuracies or typographical errors. Changes may be made from time to time without notice with respect to the Product.

TO THE FULLEST EXTENT PERMISSIBLE PURSUANT TO APPLICABLE LAW, A-NEUVIDEO DISCLAIMS ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NON-INFRINGEMENT. A-NEUVIDEO DOES NOT WARRANT THE ACCURACY, COMPLETENESS OR USEFULNESS OF ANY INFORMATION WITH RESPECT TO THE PRODUCT. A-NEUVIDEO DOES NOT WARRANT THAT THE FUNCTIONS PERTAINING TO THE PRODUCT WILL BE ERROR-FREE, THAT DEFECTS WITH RESPECT TO THE PRODUCT WILL BE CORRECTED, OR THAT THE MATERIALS PERTAINING THERETO ARE FREE OF DEFECTS OR OTHER HARMFUL COMPONENTS. A-NEUVIDEO WILL USE ITS REASONABLE EFFORTS TO CORRECT ANY DEFECTS IN THE PRODUCT UPON TIMELY WRITTEN NOTICE FROM YOU NOT TO EXCEED 10 BUSINESS DAYS AFTER RECEIPT BY YOU OF THE PRODUCT, BUT YOU (AND NOT A-NEUVIDEO) ASSUME THE ENTIRE COST OF ALL NECESSARY SERVICING, REPAIR AND CORRECTION THAT WAS CAUSED BY YOU UNLESS OTHERWISE AGREED TO IN A SEPARATE WRITING BY A-NEUVIDEO.

UNDER NO CIRCUMSTANCES, INCLUDING, BUT NOT LIMITED TO, NEGLIGENCE, SHALL A-NEUVIDEO BE LIABLE FOR ANY SPECIAL OR CONSEQUENTIAL DAMAGES THAT RESULT FROM THE USE OF, OR THE INABILITY TO USE THE PRODUCT IN ACCORDANCE WITH ITS SPECIFICATIONS, EVEN IF A-NEUVIDEO OR ITS REPRESENTATIVES HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. IN NO EVENT SHALL A-NEUVIDEO'S TOTAL LIABILITY TO YOU FROM ALL DAMAGES, LOSSES, AND CAUSES OF ACTION (WHETHER IN CONTRACT, OR OTHERWISE) EXCEED THE AMOUNT YOU PAID TO A-NEUVIDEO, IF ANY, FOR THE PRODUCT.

END OF DOCUMENT